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FAA Statistical Handbook of Aviation is a convenient source for historical data. It presents statistical information pertaining to the Federal Aviation Administration, the National Airspace System, Airports, Airport Activity, U.S. Civil Air Carrier Fleet, U.S. Civil Air Carrier Operating Data, Airmen, General Aviation Aircraft, Aircraft Accidents, Aeronautical Production & Import/Export.

Reporting period:	Calendar Year
Latest edition:	1987 data
Order from:	U.S. Government Printing Office or National Technical Information Service
Date 1988 information will be available:	Various
Date next publication is scheduled:	December 1989 (1988 Data)
Person to contact:	Patricia Beardsley

U.S. Civil Airmen Statistics is an annual study of detailed airmen statistics. It contains calendar year statistics on pilot and nonpilots and the number of certificates issued.

Reporting period:	Calendar Year
Latest edition:	1988
Order from:	Management Standards & Statistics Division or National Technical Information Service
Date 1989 information is available:	February 1990
Date next publication is scheduled:	March 1990 (1989 data)
Person to contact:	Patricia Carter

Census of U.S. Civil Aircraft is an annual publication that includes statistical data on the registered civil fleet, air carrier aircraft, and general aviation aircraft—both registered and active, detailed reports for general aviation aircraft by owner's state and county, and registered aircraft by make and model.

Reporting period:	Calendar Year
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FAA Air Traffic Activity furnishes terminal and en route air traffic activity information (e.g., takeoffs & landings, flight plans filed) of the National Airspace System. The data is collected/compiled from the FAA-operated Airport Traffic Control Towers, Air Route Traffic Control Centers, Flight Service Stations, Approach Control Facilities, and FAA Contract-towered airports.

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General Aviation Activity and Avionics Survey publication presents the results of the general aviation activity and avionics survey conducted to obtain information on the activity and avionics of the U.S. registered general aviation aircraft fleet. The survey reveals estimated flying time of the active general aviation and region of based aircraft, and primary use. Estimates are included on fuel consumption, lifetime airframe hours, avionics, and engine hours.

Reporting period: Calendar Year

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Date 1988 Information will be available: November 1989

Date next publication is available: December 1989 (1988 data)

Person to contact: Sheng-Chai Huang

FAA Directory is published twice a year, it contains six sections of data: Washington/Region/Center headquarters' managers; field facilities' managers/supervisors; regional area maps/organizational charts; alphabetical listing; special interest groups; and glossary.

Latest edition: May 1989

Order from: U.S. Government Printing Office

Date next publication is scheduled: October 1989

Person to contact: Nancy Trembley

Airport Activity Statistics of Certificated Route Air Carriers is a joint publication of the Federal Aviation Administration (FAA) and the Research & Special Programs Administration (RSPA). RSPA furnishes airport activity data on certificated route air carriers; FAA organizes/publishes it. Included in the data are passenger enplanements, tons of enplaned freight, express and mail. Both scheduled/nonscheduled service and domestic/international operations shown by airport and carrier are also included. Breakdown of data includes departures/enplanements/cargo/mail by airport, carrier & type of operation, and type of aircraft.

Reporting period:	Calendar Year
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Date next publication is available:	November 1989 (1988 data)
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PREFACE

→ The U.S. Civil Airmen Statistics is an annual study published to meet the demands of FAA, other government agencies, and industry for more detailed airmen statistics than those published in other FAA reports.

Statistics pertaining to airmen, both pilot and nonpilot, were obtained from the official airman certification records maintained at the FAA Aeronautical Center, Oklahoma City, Oklahoma.

An active Airmen is one who hold both an airmen certificate and a valid medical certificate. Airmen who must have a valid medical to exercise the privileges of their certificate are all airplane pilots, glider, flight navigators, and lighter-than-air pilots are not required to have a medical examination but the numbers represent only those who had a valid medical certificate. Mechanics, Parachute riggers, ground instructors, and dispatchers certificates represent all certificates on record at the Aeronautical Center.

This study was prepared in the Office of Management Systems, Management Standards and Statistics Division, Statistical Analysis Branch (AMS-420), by Patricia W. Carter.

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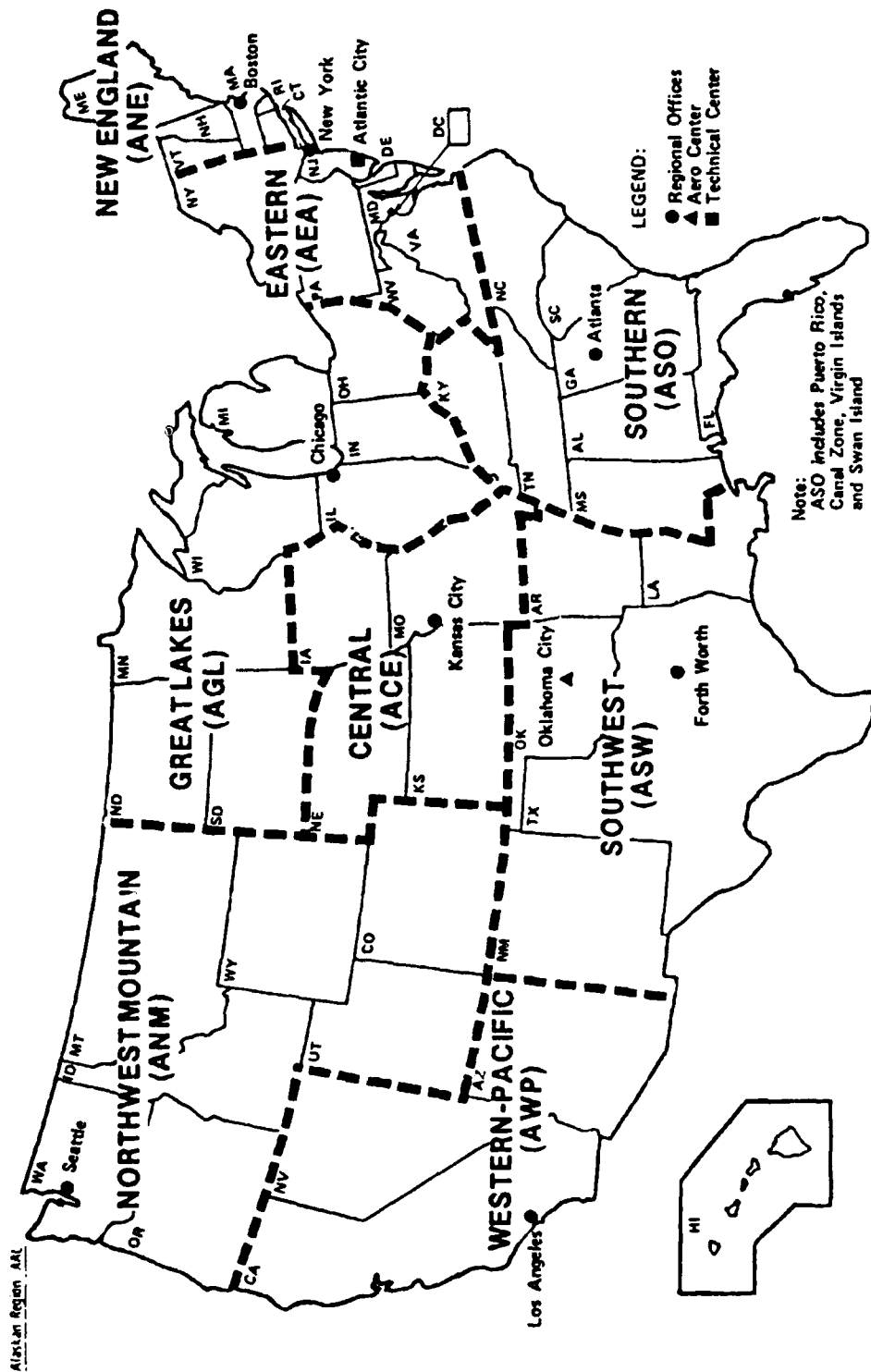
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FAA REGIONAL BOUNDARIES

Includes Locations of Regional Headquarters and Centers



I. ACTIVE PILOT CERTIFICATES HELD

TABLE 1
ESTIMATED ACTIVE PILOT CERTIFICATES HELD
December 31, 1979 - 1988

CATEGORY	1979	1980 1/	1981	1982	1983	1984	1985	1986	1987	1988
Pilot--Total	814,667	827,071	764,182	733,255	718,004	722,376	709,540	709,118	699,653	694,016
Student	210,180	199,833	179,912	156,361	147,197	150,081	146,652	150,273	146,016	136,913
Private	343,276	357,479	328,562	322,094	318,643	320,086	311,086	305,736	300,949	299,786
Commercial	182,097	183,442	168,580	165,093	159,495	155,929	151,632	147,798	143,645	143,030
Airline Transport	63,652	69,569	70,311	73,471	75,938	79,192	82,740	87,186	91,287	96,968
Helicopter (only)	5,218	6,030	6,453	7,034	7,237	7,532	8,123	8,581	8,702	8,608
Glider (only) 2/	6,796	7,039	7,388	7,842	8,157	8,390	8,168	8,411	7,901	7,600
Lighter-than-air 2/	3,448	3,679	2,976	1,360	1,337	1,166	1,139	1,133	1,153	1,111
Nonpilot--Total r/	351,981	368,356	382,840	399,661	413,199	426,802	395,139	410,079	427,962	448,710
Mechanic 3/	237,611	250,157	262,705	277,436	288,335	298,028	274,100	284,241	297,178	312,419
Parachute Rigger 3/	9,381	9,547	9,716	9,893	10,074	10,194	9,395	9,535	9,659	9,770
Ground Instructor 3/	59,680	61,550	63,246	65,004	66,385	67,463	58,214	59,443	60,861	62,582
Dispatcher 3/	6,446	6,799	7,094	7,580	8,223	8,980	8,511	9,025	9,491	10,020
Flight Navigator	1,994	1,936	1,785	1,695	1,636	1,603	1,542	1,512	1,445	1,400
Flight Engineer	36,869	38,367	38,294	38,053	38,546	40,534	43,377	46,323	49,328	52,519
Flight Instructor Certificates 4/	54,398	60,440	57,523	62,492	62,201	61,173	58,940	57,355	60,316	61,798
Instrument Ratings 5/	247,096	260,461	252,535	255,073	254,271	256,584	258,559	262,388	266,122	273,804

1/ For 1980 only, a valid medical certificate was defined as one that was issued within the last 27 months.

2/ Glider and lighter-than-air pilots are not required to have a medical examination; however, the totals above represent pilots who received a medical examination within the last 25 months.

3/ Total ratings issued to date. These ratings retain their validity without periodic medical examinations.

4/ Not included in total.

5/ Special ratings shown on pilot certificates, do not indicate additional certificates.

r/ Revised.

TABLE 2
ESTIMATED ACTIVE WOMEN CERTIFICATES HELD
December 31, 1977 - 1988

CATEGORY	1979	1980 1/	1981	1982	1983	1984	1985	1986	1987	1988
Pilot--Total	51,733	52,902	47,721	45,305	43,648	44,339	43,483	43,082	42,578	42,299
Student	26,714	26,006	22,591	19,958	18,696	19,435	19,058	18,899	18,367	17,529
Private	20,275	21,554	19,602	19,388	18,801	18,616	17,974	17,532	17,349	17,544
Commercial	3,618	3,993	4,101	4,257	4,281	4,232	4,185	4,176	4,208	4,410
Airline Transport	361	480	584	749	884	1,032	1,184	1,334	1,538	1,745
Helicopter (only)	27	55	87	113	144	167	196	232	247	259
Glider (only) 2/	461	496	540	574	599	631	653	667	627	590
Lighter-than-air 2/	277	318	216	266	243	226	233	242	242	222
Nonpilot--Total r/	4,350	4,779	5,201	5,697	6,151	6,591	6,017	6,502	7,101	7,842
Mechanic 3/	695	890	1,051	1,298	1,493	1,649	1,775	1,964	2,237	2,565
Parachute Rigger 3/	553	562	580	593	605	614	412	414	428	441
Ground Instructor 3/	2,852	3,015	3,213	3,391	3,554	3,680	2,980	3,087	3,232	3,391
Dispatcher 3/	105	141	167	199	249	310	394	460	524	622
Flight Engineer	145	171	189	215	248	336	455	577	680	822
Flight Navigator	0	0	1	1	2	2	1	0	0	1
Flight Instructor Certificates 4/	1,699	2,079	2,165	2,532	2,685	2,736	2,731	2,687	2,909	3,018

1/ For 1980 only, a valid medical certificate was defined as one that was issued within the last 27 months.

2/ Glider and lighter-than-air pilots are not required to have a medical examination; however, the totals above represent pilots who received a medical examination within the last 25 months.

3/ Total ratings issued to date. These ratings retain their validity without periodic medical examinations.

4/ Not included in total.

r/ Revised.

NOTE: Instrument ratings not reported.

TABLE 3
ESTIMATED ACTIVE PILOT AND NONPILOT CERTIFICATES HELD,
BY CLASS OF CERTIFICATES AND BY FAA REGION
December 31, 1988

CLASS OF CERTIFICATE	Total 1/	Alaskan	Central	Eastern	Great Lakes	New England	Northwest Mountain	Southern	South-west	Western-Pacific	Outside U.S. 2/
Total—All Pilots	694,016	10,191	34,932	90,964	115,271	34,433	64,901	117,731	82,964	121,715	20,914
Student Pilots—Total	136,913	1,718	5,949	20,536	23,381	8,282	12,328	22,928	15,005	23,135	3,651
Private Pilots—Total	299,786	4,858	17,937	37,864	56,764	14,811	28,529	46,663	34,948	53,696	3,716
Private Airplane (only)	289,318	4,714	17,501	36,246	55,397	14,321	27,474	44,820	33,805	51,630	3,410
Private Airplane, Private Glider	4,059	38	158	703	622	195	386	618	391	889	59
Private Airplane, Commercial Glider	799	4	22	164	109	60	98	85	70	179	8
Private Airplane, Private Gyroplane	26	0	0	3	8	1	0	2	6	6	0
Private Airplane, Private Helicopter	1,392	14	64	169	163	84	152	215	171	290	70
Private Airplane, Private Glider, Private Helicopter	60	0	1	15	10	5	3	7	5	11	3
Private Airplane, Commercial Helicopter	4,081	86	190	554	451	144	406	907	495	683	165
Private Airplane, Private Glider, Commercial Helicopter	32	1	1	5	0	1	9	6	3	5	1
Private Airplane, Commercial Glider, Commercial Helicopter	17	1	0	5	2	0	1	3	2	3	0
Private Airplane, Commercial Gyroplane, Commercial Helicopter	2	0	0	0	2	0	0	0	0	0	0
Commercial Pilots—Total	143,030	2,491	7,136	17,854	21,086	5,819	13,145	25,807	18,549	24,798	6,345
Commercial Airplane (only)	121,819	2,151	6,249	14,899	18,787	4,992	10,991	21,289	15,751	20,697	6,013
Commercial Airplane, Private Glider	2,063	22	95	323	268	78	229	339	234	450	25
Commercial Airplane, Commercial Glider	3,703	24	138	558	515	213	430	574	421	794	36
Commercial Airplane, Commercial Gyroplane, Commercial Glider	2	0	0	0	1	0	0	0	0	1	0
Commercial Airplane, Private Helicopter	302	6	12	44	57	12	25	45	40	53	8
Commercial Airplane, Commercial Glider, Private Helicopter	24	0	0	6	5	1	1	2	3	5	1
Commercial Airplane, Commercial Helicopter	14,346	275	614	1,904	1,365	486	1,386	3,425	2,014	2,625	252
Commercial Airplane, Private Glider, Commercial Helicopter	150	1	6	24	25	6	11	28	16	30	3
Commercial Airplane, Commercial Glider, Commercial Helicopter	562	10	21	90	53	30	63	96	62	132	5
Commercial Airplane, Commercial Helicopter, Commercial Gyroplane	22	1	1	2	4	0	4	4	1	4	1
Commercial Airplane, Commercial Gyroplane	24	1	0	2	4	1	4	4	5	3	0
Commercial Airplane, Commercial Gyroplane, Commercial Helicopter	13	0	0	2	2	0	1	1	2	4	1

TABLE 3
ESTIMATED ACTIVE PILOT AND NONPILOT CERTIFICATES HELD,
BY CLASS OF CERTIFICATES AND BY FAA REGION
December 31, 1988

CLASS OF CERTIFICATE	Total 1/	Alaskan	Central	Eastern	Great Lakes	New England	Northwest Mountain	Southern	South-west	Western-Pacific	Outside U.S. 2/
Airline Transport Pilots--Total	96,968	1,011	3,382	11,669	12,169	4,582	9,332	19,350	12,552	16,293	6,628
Airline Transport Airplane (only)	95,282	972	3,343	11,371	12,026	4,467	9,198	19,018	12,287	16,024	6,576
Airline Transport Airplane, Airline Transport Helicopter	1,686	39	39	298	143	115	134	332	265	269	52
Rotorcraft (only) Pilots--Total	8,608	93	331	1,333	729	441	611	2,189	1,175	1,282	424
Private Gyroplane	15	0	1	1	6	1	1	2	0	2	1
Private Helicopter	1,143	4	23	171	102	123	83	115	96	300	126
Commercial Helicopter	6,997	79	303	1,094	594	305	494	2,006	966	930	226
Commercial Helicopter, Private Glider	7	0	0	3	0	0	0	1	1	2	0
Commercial Helicopter, Commercial Glider	4	0	1	1	1	0	0	0	0	1	0
Commercial Helicopter, Commercial Gyroplane	2	0	0	0	0	0	0	1	1	0	0
Airline Transport Helicopter	440	10	3	63	26	12	33	64	111	47	71
Glider (only)--Total	7,600	13	126	1,559	952	449	828	653	571	2,306	143
Private Glider	6,528	10	112	1,308	814	369	685	572	481	2,054	123
Commercial Glider	1,072	3	14	251	138	80	143	81	90	252	20
Lighter-Than-Air--Total	1,111	7	71	149	190	49	128	141	164	205	7
Nonpilots--Total	448,710	4,524	22,221	63,872	58,437	19,268	37,996	77,950	58,717	85,163	20,562
Mechanic 3/	312,419	3,151	17,239	45,826	40,032	13,206	24,356	51,822	41,834	60,930	14,023
Parachute Rigger 3/	9,770	154	426	1,649	1,227	350	1,308	1,869	991	1,632	164
Ground Instructor 3/	62,582	712	3,114	8,651	9,887	2,763	5,660	10,725	8,266	11,247	1,557
Dispatcher 3/	10,020	158	152	1,966	963	259	497	1,870	747	1,465	1,943
Flight Navigator	1,400	5	11	221	38	157	147	234	78	404	105
Flight Engineer	52,519	344	1,279	5,559	6,290	2,533	6,028	11,430	6,801	9,485	2,770
Flight Instructor Certificates-- Total 4/	61,798	765	3,181	8,805	10,551	2,914	5,979	10,628	7,770	10,252	353
Instrument Ratings 5/	273,804	3,492	12,269	35,565	40,639	12,321	24,535	52,137	34,598	46,913	11,335

1/ Includes Outside U.S. total.

2/ Outside U.S. includes airmen certificated by the FAA who live outside the 50 states or foreign countries.

3/ Total ratings issued to date. These ratings retain their validity without periodic medical examinations.

4/ Not included in total.

5/ Special ratings shown on pilot certificates, do not indicate additional ratings.

TABLE 4
ESTIMATED ACTIVE PILOTS AND FLIGHT INSTRUCTORS BY FAA REGION AND STATE
December 31, 1988

FAA REGION AND STATE	Total Pilots	Students	Private	Commercial	Airline Transport	Misc 2/	Flight Instructor 3/
Total	694,016	136,913	299,786	143,030	96,968	17,319	61,798
United States--Total	673,102	133,262	296,070	136,685	90,340	16,745	60,845
Alaskan Region--Total	10,191	1,718	4,858	2,491	1,011	113	765
Central Region--Total	34,932	5,949	17,937	7,136	3,382	528	3,181
Iowa	7,444	1,278	4,242	1,393	441	90	648
Kansas	9,416	1,393	4,960	2,002	930	131	856
Missouri	12,838	2,415	6,028	2,500	1,652	243	1,267
Nebraska	5,234	863	2,707	1,241	359	64	410
Eastern Region--Total	90,964	20,536	37,864	17,854	11,669	3,041	8,805
Delaware	1,664	345	688	335	259	37	196
District of Columbia	633	138	281	122	55	37	59
Maryland	9,990	2,107	4,483	1,936	1,181	283	916
New Jersey	14,426	3,202	5,887	2,573	2,273	491	1,432
New York	25,228	6,227	10,703	4,847	2,376	1,075	2,301
Pennsylvania	21,199	4,980	9,126	3,698	2,795	600	2,240
Virginia	15,338	2,954	5,480	3,899	2,549	456	1,439
West Virginia	2,486	583	1,216	444	181	62	222
Great Lakes Region--Total	115,271	23,381	56,764	21,086	12,169	1,871	10,551
Illinois	27,000	5,835	12,237	4,774	3,687	467	2,648
Indiana	12,463	2,634	6,269	2,335	1,055	170	1,169
Michigan	20,025	4,117	10,241	3,439	1,799	429	1,785
Minnesota	16,194	2,915	7,919	2,933	2,260	167	1,378
North Dakota	3,234	626	1,616	876	94	22	262
Ohio	22,194	4,526	11,022	4,110	2,076	460	2,134
South Dakota	2,532	459	1,272	605	170	26	215
Wisconsin	11,629	2,269	6,188	2,014	1,028	130	960
New England Region--Total	34,433	8,282	14,811	5,819	4,582	939	2,914
Connecticut	9,326	2,085	3,644	1,553	1,792	252	792
Maine	3,890	856	1,832	796	353	53	299
Massachusetts	12,966	3,497	5,862	2,062	1,150	395	1,094
New Hampshire	4,766	1,026	1,864	806	930	140	437
Rhode Island	1,608	346	783	274	159	46	120
Vermont	1,877	472	826	328	198	53	172

TABLE 4
ESTIMATED ACTIVE PILOTS AND FLIGHT INSTRUCTORS BY FAA REGION AND STATE
December 31, 1988

FAA REGION AND STATE	Total Pilots	Students	Private	Commercial	Airline Transport	Misc 2/	Flight Instructor 3/
Northwest Mountain Region--Total	64,901	12,328	28,529	13,145	9,332	1,567	5,979
Colorado	17,695	3,828	6,560	3,464	3,283	560	1,823
Idaho	4,127	637	2,090	939	394	67	376
Montana	3,962	673	2,021	920	308	40	367
Oregon	9,830	1,743	5,222	1,979	678	208	825
Utah	5,469	1,072	2,457	997	814	129	473
Washington	21,772	3,990	9,083	4,453	3,712	534	1,947
Wyoming	2,046	385	1,096	393	143	29	168
Southern Region--Total	117,731	22,928	46,663	25,807	19,350	2,983	10,628
Alabama	9,332	1,713	3,693	2,356	703	867	937
Florida	45,663	8,417	18,094	10,555	7,793	804	4,194
Georgia	18,333	3,400	6,524	3,722	4,377	310	1,473
Kentucky	5,796	1,216	2,594	1,012	813	161	533
Mississippi	4,645	963	1,856	1,367	360	99	379
North Carolina	15,025	3,289	6,204	2,982	2,194	356	1,229
South Carolina	6,947	1,575	2,864	1,625	748	135	646
Tennessee	11,990	2,355	4,834	2,188	2,362	251	1,237
Southwest Region--Total	82,964	15,005	34,948	18,549	12,552	1,910	7,770
Arkansas	6,143	1,226	2,844	1,536	461	76	522
Louisiana	8,267	1,490	3,355	2,220	906	296	730
New Mexico	5,056	1,067	2,154	1,160	475	200	465
Oklahoma	11,353	2,148	5,639	2,452	935	179	946
Texas	52,145	9,074	20,956	11,181	9,775	1,159	5,107
Western-Pacific Region--Total	121,715	23,135	53,696	24,798	16,293	3,793	10,252
Arizona	15,478	3,015	6,603	3,261	2,073	526	1,464
California	97,245	18,382	44,141	19,533	12,286	2,903	7,952
Hawaii	3,598	786	865	867	865	215	293
Nevada	5,394	952	2,087	1,137	1,069	149	543
Outside U. S. --Total 4/	20,914	3,651	3,716	6,345	6,628	574	953
Other U. S. Areas:	1,862	554	610	344	319	35	0
American Samoa	13	1	5	3	3	1	0
Canal Zone	1	1	0	0	0	0	0
Guam	121	18	30	22	49	2	0
Puerto Rico	1,417	467	468	247	205	30	0
Virgin Island	307	66	107	70	62	2	0
Wake Island	3	1	0	2	0	0	0

1/ Includes Outside U.S.

2/ Includes helicopter, glider, and lighter-than-air.

3/ Not included in total.

4/ Outside U.S. includes Other U.S. Areas outside of the 50 states and foreign countries.

TABLE 5
ESTIMATED ACTIVE WOMEN PILOTS AND FLIGHT INSTRUCTORS BY FAA REGION AND STATE
December 31, 1988

FAA REGION AND STATE	Total Pilots	Students	Private	Commercial	Airline Transport	Misc. 2/	Flight Instructor 3/
Total 1/	42,299	17,529	17,544	4,410	1,745	1,071	3,018
United States--Total	41,680	17,247	17,370	4,305	1,711	1,047	2,978
Alaskan Region--Total	818	324	388	81	20	5	43
Central Region--Total	1,889	736	901	167	55	30	117
Iowa	357	134	183	28	7	5	20
Kansas	536	185	284	46	15	6	32
Missouri	732	322	307	63	28	12	49
Nebraska	264	95	127	30	5	7	16
Eastern Region--Total	5,829	2,569	2,206	626	216	212	444
Delaware	96	45	31	9	8	3	8
District of Columbia	68	30	29	4	4	1	4
Maryland	700	274	299	76	33	18	45
New Jersey	864	371	314	111	33	35	72
New York	1,596	709	589	166	45	87	116
Pennsylvania	1,436	651	542	153	49	41	112
Virginia	937	421	353	96	43	24	81
West Virginia	132	68	49	11	1	3	6
Great Lakes Region--Total	6,947	2,855	2,967	746	261	118	537
Illinois	1,704	705	705	190	82	22	136
Indiana	694	275	302	78	26	13	57
Michigan	1,220	513	508	126	37	36	87
Minnesota	940	352	426	99	51	12	83
North Dakota	169	55	78	33	2	1	17
Ohio	1,428	627	578	149	45	29	107
South Dakota	124	59	52	7	4	2	4
Wisconsin	668	269	318	64	14	3	46
New England Region--Total	2,377	1,079	911	217	105	65	156
Connecticut	592	256	219	55	41	21	40
Maine	213	93	97	14	8	1	15
Massachusetts	976	485	349	93	28	21	58
New Hampshire	334	142	124	36	18	14	27
Rhode Island	119	38	68	8	3	2	6
Vermont	143	65	54	11	7	6	10

TABLE 5
ESTIMATED ACTIVE WOMEN PILOTS AND FLIGHT INSTRUCTORS BY FAA REGION AND STATE
December 31, 1988

FAA REGION AND STATE	Total Pilots	Students	Private	Commercial	Airline Transport	Misc. 2/	Flight Instructor 3/
Northwest Mountain Region--Total	4,361	1,735	1,887	442	182	115	308
Colorado	1,284	566	451	141	72	54	121
Idaho	250	86	130	24	6	4	17
Montana	210	80	105	21	4	0	13
Oregon	698	251	356	60	16	15	39
Utah	261	107	115	19	12	8	13
Washington	1,544	600	674	165	71	34	101
Wyoming	114	45	56	12	1	0	4
Southern Region--Total	6,270	2,781	2,400	644	326	119	445
Alabama	359	158	151	23	5	22	17
Florida	2,703	1,129	1,101	307	128	38	212
Georgia	841	387	317	77	46	14	52
Kentucky	299	146	102	31	17	3	25
Mississippi	222	114	76	22	5	5	14
North Carolina	800	367	296	76	44	17	52
South Carolina	378	202	114	35	20	7	22
Tennessee	668	278	243	73	61	13	51
Southwest Region--Total	4,540	1,897	1,889	455	182	117	317
Arkansas	280	124	124	28	3	1	21
Louisiana	343	149	134	43	11	6	31
New Mexico	389	167	133	42	15	32	33
Oklahoma	692	263	321	71	28	9	49
Texas	2,836	1,194	1,177	271	125	69	183
Western-Pacific Region--Total	8,649	3,271	3,821	927	364	266	611
Arizona	1,147	421	507	121	46	52	79
California	6,893	2,601	3,082	736	284	190	488
Hawaii	255	115	72	33	20	15	20
Nevada	354	134	160	37	14	9	24
Outside U. S. --Total 4/	619	282	174	105	34	24	40
Other U. S. Areas:	82	51	16	7	6	2	0
American Samoa	1	1	0	0	0	0	0
Canal Zone	0	0	0	0	0	0	0
Guam	13	7	3	1	2	0	0
Puerto Rico	49	35	8	2	2	2	0
Virgin Island	18	7	5	4	2	0	0
Wake Island	1	1	0	0	0	0	0

1/ Includes Outside U.S.

2/ Includes helicopter, glider, and lighter-than-air.

3/ Not included in total.

4/ Outside U.S. includes Other U.S. Areas outside of the 50 states and foreign countries.

TABLE 6
ESTIMATED ACTIVE HELICOPTER PILOTS BY CLASS OF CERTIFICATES
December 31, 1988

Class of Certificate	Number of Certificates Held
TOTAL	31,349
Private Helicopter	1,143
Private Helicopter, Private Airplane	1,392
Private Helicopter, Private Airplane, Private Glider	60
Private Helicopter, Commercial Airplane	302
Private Helicopter, Commercial Airplane, Commercial Glider	24
Private Gyroplane	15
Private Gyroplane, Private Airplane	26
Commercial Helicopter	6,997
Commercial Helicopter, Private Helicopter	4,081
Commercial Helicopter, Private Glider	7
Commercial Helicopter, Commercial Glider	4
Commercial Helicopter, Private Airplane, Commercial Gyroplane	2
Commercial Helicopter, Private Airplane, Private Glider	32
Commercial Helicopter, Private Airplane, Commercial Glider	17
Commercial Helicopter, Commercial Airplane	14,346
Commercial Helicopter, Commercial Airplane, Private Glider	150
Commercial Helicopter, Commercial Airplane, Commercial Glider	562
Commercial Helicopter, Commercial Airplane, Commercial Gyroplane	22
Commercial Helicopter, Commercial Airplane, Commercial Gyroplane, Commercial Glider	13
Commercial Helicopter, Commercial Gyroplane	2
Commercial Gyroplane, Commercial Airplane	24
Commercial Gyroplane, Commercial Airplane, Commercial Glider	2
Airline Transport Helicopter	440
Airline Transport Airplane, Airline Transport Helicopter	1,686

TABLE 7
ESTIMATED ACTIVE GLIDER PILOTS BY CLASS OF CERTIFICATES
December 31, 1988

Class of Certificate	Number of Certificates Held
TOTAL	19,095
Private Glider	6,528
Private Glider, Private Airplane	4,059
Private Glider, Private Airplane, Private Helicopter	60
Private Glider, Private Airplane, Commercial Helicopter	32
Private Glider, Commercial Airplane	2,063
Private Glider, Commercial Airplane, Commercial Helicopter	150
Private Glider, Commercial Helicopter	7
Commercial Glider	1,072
Commercial Glider, Commercial Airplane	3,703
Commercial Glider, Private Airplane	799
Commercial Glider, Private Airplane, Commercial Helicopter	17
Commercial Glider, Commercial Helicopter	4
Commercial Glider, Commercial Airplane, Private Helicopter	24
Commercial Glider, Commercial Airplane, Commercial Helicopter	562
Commercial Glider, Commercial Airplane, Commercial Gyroplane	2
Commercial Glider, Commercial Airplane, Commercial Gyroplane, Commercial Helicopter	13

TABLE 8
ESTIMATED ACTIVE HELICOPTER AND GLIDER PILOTS
December 31, 1984-1988

Calendar Year	Total Helicopter Pilots /1		Total Glider Pilots /1	
	Number	Percent Change	Number	Percent Change
1988	31,349	-0.5%	19,095	-2%
1987	31,513	-0.6%	19,530	-4%
1986	31,697	2%	20,355	0.2%
1985	31,206	2%	20,308	-2%
1984	30,507	0%	20,733	2%

1/ Includes pilots with ratings to fly helicopters only.

2/ Includes pilots with ratings to fly gliders only.

TABLE 9
ESTIMATED TOTAL PILOTS AND INSTRUMENT RATED PILOTS
December 31, 1984-1988

Calendar Year	Total Pilots 1/	Instrument Rated Pilots	
		Number	Percent of Total
1988	557,103	273,804	49
1987	553,637	266,122	48
1986	558,845	262,388	47
1985	562,888	258,559	46
1984	572,295	256,584	45

1/ Excludes student pilots.

TABLE 10
ESTIMATED ACTIVE PILOT CERTIFICATES HELD
BY CATEGORY AND AGE GROUP OF HOLDER
1988, 1987, and 1984

YEAR	Type of Pilot Certificates								
	Total Active Pilots			Student			Private		
	1988	1987	1984	1988	1987	1984	1988	1987	1984
Total	694,016	709,118	722,376	136,913	146,016	150,081	299,786	300,949	320,086
Age Group									
14-15	243	252	269	243	264	269	0	0	0
16-19	19,995	18,135	17,836	15,224	15,542	13,588	4,367	3,854	3,912
20-24	55,141	58,029	65,665	23,838	26,443	28,726	20,824	20,522	25,768
25-29	83,355	89,246	95,406	25,187	27,617	29,549	31,308	32,058	38,793
30-34	96,632	102,263	104,484	21,946	23,762	24,939	40,858	42,746	47,320
35-39	96,922	105,580	110,280	17,420	18,413	19,489	44,641	44,903	47,023
40-44	97,054	96,586	93,214	12,959	13,437	12,814	41,632	41,570	41,312
45-49	77,435	73,040	72,168	8,216	8,251	8,083	34,073	33,189	32,581
50-54	57,909	59,077	61,657	4,935	5,214	5,758	25,962	26,151	30,204
55-59	46,820	48,211	47,428	3,363	3,621	3,816	23,453	24,862	27,393
60 and over	62,510	58,699	53,969	3,582	3,452	3,050	32,668	31,094	25,780

YEAR	Type of Pilot Certificates								
	Commercial			Airline Transport			Helicopter (Only)		
	1988	1987	1984	1988	1987	1984	1988	1987	1984
Total	143,030	143,645	155,929	96,968	91,287	79,192	8,608	8,702	7,532
Age Group									
14-15	0	0	0	0	0	0	0	0	0
16-19	260	215	184	0	0	0	18	10	13
20-24	8,804	7,791	9,174	433	453	630	854	891	778
25-29	17,542	16,999	17,823	6,395	6,436	6,133	2,228	2,416	1,963
30-34	16,592	16,497	17,603	14,224	13,117	11,470	1,749	1,709	1,525
35-39	16,190	17,514	24,666	15,692	15,614	15,553	1,396	1,575	1,876
40-44	21,387	22,637	24,187	18,226	16,792	13,004	1,456	1,322	809
45-49	18,282	18,146	18,643	15,456	14,342	11,784	536	441	339
50-54	13,897	14,349	15,499	12,263	11,335	9,387	222	198	126
55-59	11,394	11,140	10,279	7,939	7,184	5,168	90	86	71
60 and over	18,682	18,357	17,871	6,340	6,014	6,063	59	54	32

YEAR	Type of Pilot Certificates								
	Glider (Only) 1/			Lighter-than-air 1/			Flight Instructor 2/		
	1988	1987	1984	1988	1987	1984	1988	1987	1984
Total	7,600	7,901	8,390	1,111	1,153	1,166	61,798	60,316	61,173
Age Group									
14-15	0	0	0	0	0	0	0	0	0
16-19	112	118	126	14	13	13	95	91	71
20-24	346	428	527	42	47	62	4,484	4,349	4,932
25-29	574	678	982	121	132	163	8,048	7,927	8,860
30-34	1,052	1,237	1,368	211	243	259	8,622	8,518	9,202
35-39	1,307	1,363	1,356	276	304	317	8,450	8,734	10,370
40-44	1,171	1,112	929	223	212	159	9,518	9,343	8,349
45-49	764	732	657	108	93	81	7,372	6,895	6,331
50-54	581	549	621	49	48	62	5,471	5,195	5,022
55-59	542	596	668	39	40	33	4,124	3,968	3,304
60 and over	1,151	1,088	1,156	28	21	17	5,614	5,296	4,732

1/ Glider and lighter-than-air pilots are not required to have a medical examination; however, totals above represent pilots who received a medical examination.

2/ Not included in total active pilots.

TABLE 11
AVERAGE AGE OF ACTIVE PILOTS BY CATEGORY

CALENDAR YEAR	TOTAL 1/	STUDENT	PRIVATE	COMMERCIAL	AIRLINE TRANSPORT
1979	37.2	30.5	38.7	40.2	42.1
1980	37.5	30.5	39.0	40.4	41.9
1981	37.8	30.7	39.3	40.7	42.0
1982	38.3	31.2	39.5	41.0	42.3
1983	38.8	31.7	40.0	41.5	42.5
1984	39.2	32.1	40.4	42.0	42.7
1985	39.5	32.4	40.8	42.4	42.8
1986	39.7	32.2	41.1	42.6	43.0
1987	39.9	32.3	41.4	42.7	43.1
1988	40.1	32.5	41.4	42.6	43.2

1/ Includes helicopter (only), glider (only), and lighter-than-air pilots not shown separately.

TABLE 12
ESTIMATED INSTRUMENT RATINGS HELD BY CLASS OF CERTIFICATES
December 31, 1988 and 1987

Class of Certificate	1988	1987	Percent Change
TOTAL--ALL PILOTS	273,804	266,122	3%
Private Pilots--Total	49,381	47,746	3%
Private Airplane (only)	45,316	43,885	3%
Private Airplane, Private Glider	1,007	983	2%
Private Airplane, Commercial Glider	108	102	6%
Private Airplane, Private Helicopter	356	332	7%
Private Airplane, Private Glider, Private Helicopter	25	25	0%
Private Airplane, Commercial Helicopter	2,537	2,385	6%
Private Airplane, Private Gyroplane	3	3	0%
Private Airplane, Private Glider, Commercial Helicopter	15	21	-29%
Private Airplane, Commercial Glider, Commercial Helicopter	13	9	44%
Private Airplane, Other	1	1	0%
Commercial Pilots--Total	121,674	121,072	0%
Commercial Airplane (only)	102,982	102,017	1%
Commercial Airplane, Private Glider	1,778	1,756	1%
Commercial Airplane, Commercial Glider	3,033	3,098	-2%
Commercial Airplane, Private Helicopter	264	234	13%
Commercial Airplane, Commercial Helicopter	12,911	13,250	-3%
Commercial Airplane, Private Glider, Commercial Helicopter	132	134	-1%
Commercial Airplane, Commercial Glider, Commercial Helicopter	506	526	-4%
Commercial Airplane, Commercial Gyroplane	15	15	0%
Commercial Airplane, Commercial Helicopter, Commercial Gyroplane	18	15	20%
Commercial Airplane, Commercial Gyroplane, Commercial Glider	1	1	0%
Commercial Airplane, Commercial Glider, Private Helicopter	21	16	31%
Commercial Airplane, Commercial Gyroplane, Commercial Helicopter			
Commercial Glider	13	10	30%
Airline Transport Pilots--Total	96,968	91,287	6%
Airline Transport Airplane (only)	95,282	89,694	6%
Airline Transport Airplane, Airline Transport Helicopter	1,686	1,593	6%
Rotorcraft Pilots--Total	5,781	6,017	-4%
Commercial Helicopter	5,695	5,927	-4%
Airline Transport Helicopter	75	81	-7%
Other	11	9	22%

II. ACTIVE NONPILOT CERTIFICATES HELD

TABLE 13
ESTIMATED INSTRUMENT RATINGS HELD, BY CLASS OF CERTIFICATES,
BY FAA REGION
December 31, 1988

CLASS OF CERTIFICATE	Total 1/	Alaskan	Central	Eastern	Great Lakes	New England	Northwest Mountain	Southern	South-west	Western-Pacific	Outside U S 2/
Total—All Pilots	273,804	3,492	12,269	35,565	40,639	12,321	24,535	52,137	34,598	46,913	11,335
Private Pilots—Total	49,381	359	2,711	6,966	9,601	2,476	3,782	8,421	5,622	9,073	370
Private Airplane (only)	45,316	299	2,502	6,334	9,101	2,298	3,430	7,479	5,117	8,417	339
Private Airplane, Private Glider	1,007	6	34	173	156	57	67	166	99	240	9
Private Airplane, Commercial Glider	108	2	3	18	13	14	20	5	12	21	0
Private Airplane, Private Helicopter	356	0	19	44	47	20	34	69	42	77	4
Private Airplane, Private Glider, Private Helicopter	25	0	0	6	4	2	2	3	2	6	0
Private Airplane, Commercial Helicopter	2,537	50	152	386	275	85	223	693	344	311	18
Private Airplane, Private Gyroplane	3	0	0	0	2	0	0	0	1	0	0
Private Airplane, Private Glider, Commercial Helicopter	15	1	1	1	0	0	5	4	3	0	0
Private Airplane, Commercial Glider, Commercial Helicopter	13	1	0	4	2	0	1	2	2	1	0
Private Airplane, Other	1	0	0	0	1	0	0	0	0	0	0
Commercial Pilots—Total	121,674	2,049	5,910	15,979	18,343	5,037	11,022	22,574	15,606	20,886	4,268
Commercial Airplane (only)	102,982	1,758	5,122	13,302	16,316	4,294	9,201	18,494	13,163	17,350	3,982
Commercial Airplane, Private Glider	1,778	20	82	281	238	71	183	301	195	386	21
Commercial Airplane, Commercial Glider	3,033	20	115	449	442	186	357	458	342	632	32
Commercial Airplane, Private Helicopter	264	4	10	40	51	10	21	42	35	43	8
Commercial Airplane, Commercial Helicopter	12,911	236	553	1,792	1,216	441	1,184	3,166	1,793	2,315	215
Commercial Airplane, Private Glider, Commercial Helicopter	132	1	6	23	22	6	10	24	14	24	2
Commercial Airplane, Commercial Glider, Commercial Helicopter	506	9	21	83	45	27	56	85	55	120	5
Commercial Airplane, Commercial Gyroplane	15	0	0	2	2	1	4	1	3	2	0
Commercial Airplane, Commercial Helicopter, Commercial Gyroplane	18	1	1	0	4	0	4	2	1	4	1
Commercial Airplane, Commercial Gyroplane, Commercial Glider	1	0	0	0	0	0	0	0	0	1	0
Commercial Airplane, Commercial Glider, Private Helicopter	21	0	0	5	5	1	1	0	3	5	1
Commercial Airplane, Commercial Gyroplane, Commercial Helicopter, Commercial Glider	13	0	0	2	2	0	1	1	2	4	1
Airline Transport Pilots—Total	96,968	1,011	3,382	11,669	12,169	4,582	9,332	19,350	12,552	16,293	6,628
Airline Transport Airplane (only)	95,282	972	3,343	11,371	12,026	4,467	9,198	19,018	12,287	16,024	6,576
Airline Transport Airplane, Airline Transport Helicopter	1,686	39	39	298	143	115	134	332	265	269	52
Rotorcraft Pilots (only)—Total	5,781	73	266	951	526	226	399	1,792	818	661	69
Commercial Helicopter	5,695	72	265	939	516	222	394	1,779	797	650	61
Airline Transport Helicopter	75	1	0	10	10	3	5	12	19	8	7
Other	11	0	1	2	0	1	0	1	2	3	1

1/ Includes Outside U.S. total.

2/ Outside U.S. includes airmen certificated by FAA who live outside the 50 states or foreign countries.

TABLE 14
ESTIMATED ACTIVE NONPILOT AIRMEN CERTIFICATES HELD,
BY FAA REGION AND STATE
December 31, 1988 1/

FAA REGION AND STATE	Total Nonpilot Airmen	Mechanic	Parachute Rigger	Ground Instructor	Dispatcher	Flight Navigator	Flight Engineer
Total 2/	448,710	312,419	9,770	62,582	10,020	1,400	52,519
United States--Total	428,148	298,396	9,606	61,025	8,077	1,295	49,749
Alaskan Region--Total	4,524	3,151	154	712	158	5	344
Central Region--Total	22,221	17,239	426	3,114	152	11	1,279
Iowa	2,755	2,032	87	526	9	0	101
Kansas	6,187	4,789	109	926	42	4	317
Missouri	11,438	9,073	162	1,335	97	3	768
Nebraska	1,841	1,345	68	327	4	4	93
Eastern Region--Total	63,872	45,826	1,649	8,651	1,966	221	5,559
Delaware	1,149	814	25	155	14	6	135
District of Columbia	338	201	19	82	14	0	22
Maryland	4,150	2,538	138	823	57	13	581
New Jersey	11,163	7,755	242	1,368	372	64	1,362
New York	24,552	19,323	392	2,600	1,100	63	1,074
Pennsylvania	14,762	10,848	364	2,111	260	42	1,137
Virginia	6,796	3,692	423	1,301	145	33	1,202
West Virginia	962	655	46	211	4	0	46
Great Lakes Region--Total	58,437	40,032	1,227	9,887	963	38	6,290
Illinois	16,080	10,535	281	2,540	321	13	2,390
Indiana	5,826	4,139	191	97	38	4	448
Michigan	9,507	6,658	185	1,873	103	7	676
Minnesota	10,016	6,775	137	1,239	298	2	1,565
North Dakota	908	697	25	146	2	0	38
Ohio	10,794	7,665	260	2,026	115	6	722
South Dakota	942	664	22	201	3	1	51
Wisconsin	4,364	2,899	126	886	48	5	400
New England Region--Total	19,268	13,206	350	2,763	259	157	2,533
Connecticut	5,831	3,761	81	779	81	101	1,028
Maine	1,388	905	45	242	28	8	160
Massachusetts	8,547	6,633	165	1,079	94	13	563
New Hampshire	2,040	953	31	370	31	27	628
Rhode Island	823	562	18	156	10	3	74
Vermont	639	392	10	137	15	5	80

TABLE 14
ESTIMATED ACTIVE NONPILOT AIRMEN CERTIFICATES HELD,
BY FAA REGION AND STATE
December 31, 1988 1/

FAA REGION AND STATE	Total Nonpilot Airmen	Mechanic	Parachute Rigger	Ground Instructor	Dispatcher	Flight Navigator	Flight Engineer
Northwest Mountain Region--Total	37,996	24,356	1,308	5,660	497	147	6,028
Colorado	11,680	7,102	158	1,797	193	27	2,403
Idaho	1,673	1,093	156	301	11	3	109
Montana	1,996	1,252	278	364	4	5	93
Oregon	4,111	2,870	238	681	38	28	256
Utah	2,881	1,816	79	401	16	4	565
Washington	14,656	9,473	366	1,961	225	77	2,554
Wyoming	999	750	33	155	10	3	48
Southern Region--Total	77,950	51,822	1,869	10,725	1,870	234	11,430
Alabama	5,864	4,668	136	856	9	7	188
Florida	35,922	24,783	545	4,813	1,110	184	4,487
Georgia	15,892	10,161	288	1,523	304	12	3,604
Kentucky	2,804	1,709	158	461	90	0	386
Mississippi	1,703	1,184	42	344	8	3	122
North Carolina	7,014	4,144	439	1,161	147	15	1,108
South Carolina	2,645	1,641	93	545	23	5	338
Tennessee	6,106	3,532	168	1,022	179	8	1,197
Southwest Region--Total	58,717	41,834	991	8,266	747	78	6,801
Arkansas	2,370	1,673	72	440	16	2	167
Louisiana	4,586	3,425	90	656	43	5	367
New Mexico	2,105	1,405	66	483	22	3	126
Oklahoma	13,092	11,205	162	1,339	32	9	345
Texas	36,564	24,126	601	5,348	634	59	5,796
Western-Pacific Region--Total	85,163	60,930	1,632	11,247	1,465	404	9,485
Arizona	8,929	6,274	195	1,454	226	20	760
California	70,455	50,990	1,323	8,897	1,063	316	7,866
Hawaii	3,008	2,107	59	363	134	13	332
Nevada	2,771	1,559	55	533	42	55	527
Outside U. S. --Total 3/	20,562	14,023	164	1,557	1,943	105	2,770
Other U. S. Areas	1,557	1,174	34	197	62	0	90
American Samoa	11	7	0	3	0	0	1
Canal Zone	39	16	18	3	2	0	0
Guam	160	89	2	22	7	0	40
Puerto Rico	1,195	950	12	146	50	0	37
Virgin Island	143	103	2	23	3	0	12
Wake Island	9	9	0	0	0	0	0

1/ Data for flight engineers and flight navigators represent total active ratings held. Data for dispatchers, mechanics, parachute riggers and ground instructors represent total ratings issued to date. These ratings retain their validity.

2/ Includes Outside U. S.

3/ Outside U.S. includes Other U.S. Areas outside of the 50 states and foreign countries.

TABLE 15
ESTIMATED ACTIVE WOMEN NONPILOT CERTIFICATES HELD, BY FAA REGION AND STATE:
 BY REGION AND STATE
December 31, 1988 1/

FAA REGION AND STATE	Total Nonpilot Airmen	Mechanic	Parachute Rigger	Ground Instructor	Dispatcher	Flight Navigator	Flight Engineer
Total 2/	7,842	2,565	441	3,391	622	1	822
United States--Total	7,733	2,550	435	3,339	597	0	812
Alaskan Region--Total	129	28	11	48	31	0	11
Central Region--Total	338	156	18	149	5	0	10
Iowa	74	39	2	32	1	0	0
Kansas	113	60	6	45	0	0	2
Missouri	124	52	7	53	4	0	8
Nebraska	27	5	3	19	0	0	0
Eastern Region--Total	1,006	234	82	442	140	0	108
Delaware	22	9	1	8	1	0	3
District of Columbia	10	0	1	5	1	0	3
Maryland	95	17	4	50	6	0	18
New Jersey	140	32	6	56	29	0	17
New York	338	92	13	137	74	0	22
Pennsylvania	228	47	25	108	23	0	25
Virginia	149	21	32	71	5	0	20
West Virginia	24	16	0	7	1	0	0
Great Lakes Region--Total	1,273	424	59	577	88	0	125
Illinois	364	124	14	152	22	0	52
Indiana	127	23	19	56	9	0	20
Michigan	214	60	6	122	13	0	13
Minnesota	162	60	5	52	23	0	22
North Dakota	14	2	0	8	1	0	3
Ohio	283	132	11	117	13	0	10
South Dakota	18	4	0	14	0	0	0
Wisconsin	91	19	4	56	7	0	5
New England Region--Total	355	115	14	162	22	0	42
Connecticut	122	47	4	40	9	0	22
Maine	26	5	1	17	2	0	1
Massachusetts	132	39	7	67	7	0	12
New Hampshire	49	19	1	20	3	0	6
Rhode Island	12	3	0	8	1	0	0
Vermont	14	2	1	10	0	0	1

TABLE 15
ESTIMATED ACTIVE WOMEN NONPILOT CERTIFICATES HELD, BY FAA REGION AND STATE:
BY REGION AND STATE
December 31, 1988 1/

FAA REGION AND STATE	Total Nonpilot Airmen	Mechanic	Parachute Rigger	Ground Instructor	Dispatcher	Flight Navigator	Flight Engineer
Northwest Mountain Region--Total	746	256	29	321	34	0	106
Colorado	248	81	1	101	11	0	54
Idaho	30	8	2	16	3	0	1
Montana	35	8	5	21	1	0	0
Oregon	81	16	9	51	2	0	3
Utah	49	15	6	19	1	0	8
Washington	285	123	4	104	14	0	40
Wyoming	18	5	2	9	2	0	0
Southern Region--Total	1,390	380	122	580	127	0	181
Alabama	137	43	6	86	1	0	1
Florida	564	179	16	235	70	0	64
Georgia	166	53	11	58	14	0	30
Kentucky	87	23	9	30	15	0	10
Mississippi	24	5	1	17	0	0	1
North Carolina	175	32	41	74	8	0	20
South Carolina	59	11	4	28	3	0	13
Tennessee	178	34	34	52	16	0	42
Southwest Region--Total	990	373	48	434	55	0	80
Arkansas	30	9	0	18	0	0	3
Louisiana	89	40	2	38	7	0	2
New Mexico	68	16	3	41	3	0	5
Oklahoma	188	94	8	76	1	0	9
Texas	615	214	35	261	44	0	61
Western-Pacific Region--Total	1,506	584	52	626	95	0	149
Arizona	160	49	6	83	14	0	8
California	1,245	516	44	497	64	0	124
Hawaii	56	10	0	25	12	0	9
Nevada	45	9	2	21	5	0	8
Outside U. S. --Total 3/	109	15	6	52	25	1	10
Other U. S. Areas:	15	6	0	5	1	0	3
American Samoa	0	0	0	0	0	0	0
Canal Zone	0	0	0	0	0	0	0
Guam	3	1	0	0	0	0	2
Puerto Rico	8	4	0	3	1	0	0
Virgin Island	4	1	0	2	0	0	1
Wake Island	0	0	0	0	0	0	0

1/ Data for flight engineers and flight navigators represent total active ratings held. Data for dispatchers, mechanics, parachute riggers and ground instructors represent total ratings issued to date. These ratings retain their validity.

2/ Includes Outside U. S.

3/ Outside U.S. includes Other U.S. Areas outside of the 50 states and foreign countries.

III. PILOT CERTIFICATES ISSUED

TABLE 16
PILOT CERTIFICATES ISSUED, BY CATEGORY
Calendar years 1984 - 1988

YEAR	1984		1985		1986		1987		1988	
Category of Certificates	Original	Additional	Original	Additional	Original	Additional	Original	Additional	Original	Additional
Pilot--Total	141,845	30,469	138,589	28,420	141,625	32,628	149,640	39,990	148,018	37,921
Student	90,167	0	86,060	0	88,699	0	85,611	0	86,193	0
Private	36,545	11,784	35,402	11,686	34,816	12,672	42,278	16,302	39,900	15,800
Commercial	7,702	8,892	8,404	7,197	8,889	9,241	11,314	11,365	12,042	10,597
Airline Transport	5,099	9,335	6,081	9,192	6,498	10,372	7,678	11,956	7,461	11,209
Helicopter (only)	1,808	319	2,105	207	2,209	234	2,217	293	1,947	287
Glider (only)	524	139	537	138	514	109	542	74	475	28
Nonpilot--Total r/	15,438	4,808	16,432	4,713	16,470	5,010	21,878	5,486	21,317	6,422
Mechanic	10,719	4,042	10,559	3,429	10,998	3,289	15,089	4,195	14,907	4,353
Parachute Rigger	149	12	157	9	149	11	194	11	142	8
Ground Instructor	1,283	293	1,359	343	1,386	323	1,825	366	1,716	334
Dispatcher	755	3	622	3	516	1	533	3	510	2
Flight Navigator	14	0	1	0	17	0	4	0	270	315
Flight Engineer	2,518	458	3,734	929	3,404	1,386	4,233	911	3,772	1,410
Flight Instructor Certificates 1/	4,075	6,828	4,298	5,921	4,628	5,421	6,327	6,378	4,898	5,234
Instrument Ratings 2/	0	10,845	0	11,673	0	13,688	0	18,296	0	16,810

(P) Preliminary

r/ Revised

N/A Not Available

Note: Additional ratings are entered on current airman certificates as follows:

Private, commercial, and airline transport pilot--aircraft category, class, and type instrument rating.

Helicopter pilot--instrument and type ratings.

Flight instructor--ratings for each aircraft category in which the holder is qualified, and for instrument flying instructions.

Mechanic--airframe and powerplant ratings.

Parachute rigger--senior or master rigger--senior or master rigger ratings.

Ground instructor--ratings for each subject in which the holder is qualified to give instruction.

1/ Not included in total.

2/ Special ratings shown on pilot certificates represented above; not included in total.

TABLE 17
PILOT CERTIFICATES ISSUED, BY CATEGORY AND CONDUCTOR
December 31, 1988

Category of Certificates	Total Ratings Issued	Original Issuances				Additional Ratings			
		Total	Examiner	Inspector	No Test	Total	Examiner	Inspector	No Test
Pilot--Total	185,939	148,018	50,517	87,098	10,403	37,921	33,617	1,299	3,005
Student	86,193	86,193	0	86,193	0	0	0	0	0
Private	55,700	39,900	34,241	172	5,487	15,800	14,987	92	721
Commercial	22,639	12,042	8,550	119	3,373	10,597	8,890	90	1,617
Airline Transport	18,670	7,461	6,335	568	558	11,209	9,524	1,104	581
Helicopter (only)	2,234	1,947	938	38	971	287	189	13	85
Glider (only)	503	475	453	8	14	28	27	0	1

Nonpilot--Total r/	27,739	21,317	15,497	522	5,298	6,422	4,654	62	1,706
Mechanic	19,260	14,907	12,155	58	2,694	4,353	4,049	6	298
Parachute Rigger	150	142	82	10	50	8	7	1	0
Ground Instructor	2,050	1,716	126	28	1,562	334	26	1	307
Dispatcher	512	510	299	78	133	2	0	0	2
Flight Navigator	585	270	231	1	38	315	295	2	18
Flight Engineer	5,182	3,772	2,604	347	821	1,410	277	52	1,081
Flight Instructor									
Certificates *	10,132	4,898	3,898	951	49	5,234	5,080	139	15

(P) Preliminary

Note: Excludes Renewals

Note: Additional ratings are entered on current airman certificates as follows:

Private, commercial, and airline transport pilot--aircraft category, class, and type instrument rating.

Helicopter pilot--instrument and type ratings.

Flight instructor--ratings for each aircraft category in which the holder is qualified, and for instrument flying instructions.

Mechanic--airframe and powerplant ratings.

Parachute rigger--senior or master rigger--senior or master rigger ratings.

Ground instructor--ratings for each subject in which the holder is qualified to give instruction.

* Special ratings shown on pilot certificates represented above; not included in total.

TABLE 18
INSTRUMENT RATINGS ISSUED: 1988, 1987, AND 1984

CLASS OF CERTIFICATE	1988	1987	1984	Percent Change 1988-1987
Total--All Pilots	16,810	18,296	10,847	-8%
Private Pilots--Total	9,772	11,142	6,592	-12%
Private Airplane (only)	8,946	10,397	6,140	-14%
Private Airplane, Private Glider	92	135	91	-32%
Private Airplane, Commercial Glider	18	12	5	50%
Private Airplane, Private Helicopter	40	35	27	14%
Private Airplane, Private Glider, Private Helicopter	0	1	0	-100%
Private Airplane, Commercial Helicopter	272	234	139	16%
Private Airplane, Other	404	328	190	23%
Commercial Pilots--Total	6,101	5,996	3,275	2%
Commercial Airplane (only)	5,267	5,044	2,736	4%
Commercial Airplane, Private Glider	49	48	28	2%
Commercial Airplane, Commercial Glider	41	61	29	-33%
Commercial Airplane, Private Helicopter	11	14	3	-21%
Commercial Airplane, Commercial Helicopter	723	814	453	-11%
Commercial Airplane, Private Glider, Commercial Helicopter	3	7	1	-57%
Commercial Airplane, Commercial Glider, Commercial Helicopter	6	7	25	-14%
Commercial Airplane, Other	1	1	0	0%
Rotorcraft Pilots--Total	937	1,158	980	-19%
Commercial Helicopter	909	1,135	977	-20%
Commercial Helicopter, Airline Transport Helicopter	22	20	1	10%
Commercial Helicopter, Commercial Glider	0	1	1	-100%
Commercial Helicopter, Other	6	2	1	200%

TABLE 19
STUDENT CERTIFICATES ISSUED, BY MONTH: 1984 - 1988

YEAR	1984	1985	1986	1987	1988
TOTAL	90,167 r/	86,060	88,706	85,661	86,193 (P)
January	7,485	6,414	6,641	6,098	5,410
February	6,338	5,233	5,590	6,543	6,157
March	7,086	6,809	6,472	7,125	7,133
April	6,931	7,492	7,488	7,139	6,606
May	7,784	7,749	7,415	6,164	7,014
June	8,533	8,279	8,211	8,491	8,539
July	9,202	9,249	9,648	8,973	7,796
August	9,559	8,892	8,886	8,389	8,978
September	7,781	7,973	8,961	8,109	7,388 (P)
October	8,129	7,892	8,133	7,585	6,277 (P)
November	6,291	5,579	5,809	5,912	7,457 (P)
December	5,048	4,499	5,452	5,133	7,438 (P)

(P) Preliminary

r/ Revised